



PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES**

Application No. : 10/535,674
Confirmation No. : 7677
Applicant : Klaus Bussinger et al.
Filed : May 19, 2005
Title : Device for determining and/or monitoring the volume,
and/or mass, flow rate of a medium
TC/A.U. : 2863
Examiner : H. D. T. Khuu
Docket No. : BUSS3001/FJD
Customer No. : 23364

BRIEF ON APPEAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA. 22202-3514

Sir:

INTRODUCTORY COMMENTS

Pursuant to the provisions of 37 CFR 41.37, submitted herewith is Applicant/Appellant's Brief on Appeal along with the required fee. The period for response has been extended to expire on January 13, 2009 by the filing herewith of a Petition for a Three Month Extension of Time and payment of the required fee.

Any additional fees necessary for this appeal may be charged to the undersigned's Deposit Account No. 02-0200.

REAL PARTY IN INTEREST

(37 CFR 41.37(c)(1)(i))

The real party in interest is Applicant/Appellant's assignee Endress + Hauser Flowtec AG. The assignment was recorded on May 22, 2006 at Reel 017662 and Frame 0239.

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RELATED APPEALS AND INTERFERENCES

(37 CFR 41.37(c)(1)(ii))

There are no related appeals or interferences with respect to the invention defined in this application.

STATUS OF CLAIMS

(37 CFR 41.37(c)(1)(iii))

Claims 12-17, 22-26 are pending in this application.

Claims 12 - 17 and 22 have been finally rejected.

Claims 23 - 26 are allowed. As such, these claims are not part of this appeal.

STATUS OF AMENDMENTS

(37 CFR 41.37(c)(1)(iv))

A Request for Reconsideration with Amendment was filed after issuance of the Office Action of February 13, 2008.

An Interview Summary was issued on July 18, 2008 and an Advisory Action on August 27, 2008.

An amendment will be filed concurrently herewith to provide proper identifiers as noted by the examiner in the Advisory Action of August 27, 2008.

SUMMARY OF CLAIMED SUBJECT MATTER

(37 CFR 41.37 (c)(1)(v))

(References are to page and line of the specification)

The invention disclosed and claimed relates to a device for determining

and/or monitoring the volume, and/or mass flow rate of a medium flowing through a containment in a streaming direction (pg. 1, lines 4 - 6). The object of the invention is to provide a flow measuring device distinguished by a low electrical current consumption, i.e., a low power uptake (pg. 3, lines 14 - 16). The inventive device is defined as including at least one ultrasonic transducer, which according to one preferred embodiment comprises ultrasonic transducers 5 and 6, and a control/evaluation unit, which according to the noted preferred embodiment comprises the unit 11 (pg. 6, lines 30 - 32). The ultrasonic transducers emit and receive ultrasonic measuring signals, whereas the control/evaluation unit determines the volume, and/or mass flow rate of the medium in the container on the basis of the ultrasonic measuring signals according to the travel-time-difference principle or according to the Doppler principle (pg. 7, lines 7 - 11 and pg. 1, lines 8 11). The control/evaluation unit has at least one high power uptake component 12 which is operated intermittently in a measured phase and in an idle phase, wherein the component 12 is activated in the measuring phase and has a reduced power uptake, or is turned off, in the idle phase (pg. 9, lines 2 - 11).

GROUND'S OF REJECTION TO BE REVIEWED ON APPEAL

(37 CFR 41.37(c)(1)(vi))

Claims 12 - 17 and 22 have been finally rejected under 35 Usc 102(a) as being anticipated by Schaffer et al (US 2005/0137812).

Two issues are raised by the final rejection, namely: (1) is the Schaffer et al publication effective in view of its publication date? (2) does Schaffer et al teach the invention as claimed.

ARGUMENTS
(37 CFR 41.37(c)(1)(vii))

(1)

The Schaffer et al publication issued as U.S. Patent No. 7,194,363 on March 20, 2007 and is owned by the assignee of the present application. The filing date of the '363 patent is December 22, 2003. There is no earlier date to which the '363 patent is entitled. The present application is the national phase application of PCT/EP2003/012861, which was filed on November 17, 2003, which is approximately one month earlier than the effective date of the '363 patent. Accordingly, the Schaffer et al publication and the corresponding patent are not effective as a reference against the claims of the present application. See MPEP 1893.03(b) which refers to 35 USC 363 which states that "[a]n international application designating the United States shall have the effect, from its international filing date...." Clearly, this instruction was not taken into consideration by the examiner in the examination of the claims which have been finally rejected.

In the Advisory Action of August 27, 2008, the examiner states: "Examiner's position is that according to MPEP 1896.II.B, PCT/EP03/12861 was not published in English under PCT Article 21(2), therefore does not qualify the international filing date as a US filing date for prior art purposes." This statement applies to the use of the publication as a reference, ***but PCT/EP03/12861 is the international application of the application being examined, it is not being used as a reference.*** The present application does have the PCT filing date as its U.S. filing date, and that date does pre-date the effective date of the applied publication, or the '363 patent.

(2)

Independent claim 12, with a control/evaluation unit with a high power uptake component which is operated intermittently in a measuring phase and in an idle phase.

The '363 patent does not disclose such a component. Without such a teaching the '363 patent cannot anticipate claim 12, or the claims which depend therefrom, since anticipation requires that each and every element claimed be found in a single reference. See, for example, *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

CONCLUSION

In view of the above, it is respectfully submitted that claims 12 - 17 and 22 should be allowed over the '363 patent, as are claims 23 - 26..

Date: January 13, 2009

Respectfully submitted

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APPENDIX OF CLAIMS
(37 CFR 41.37 (c)(1)(viii))

Claims 1 - 11 (Cancelled).

12. A flow measuring device for determining and/or monitoring the volume, and/or mass, flow rate of a medium flowing through a containment in a streaming direction, comprising:

at least one ultrasonic transducer, which emits and/or receives ultrasonic measuring signals; and

a control/evaluation unit, which determines the volume, and/or mass, flow rate of the medium in the containment on the basis of the ultrasonic measuring signals according to the travel-time-difference principle or according to the Doppler principle, wherein:

associated with said control/evaluation unit is at least one component of high power uptake; and

said control/evaluation unit is embodied such that said at least one component of high power uptake is operated intermittently in a measuring phase and in an idle phase, wherein said at least one component is activated in the measuring phase, while said at least one component has a reduced power uptake, or is turned off, in the idle phase.

13. The flow measuring device as claimed in claim 12, wherein:

the flow measuring device is a clamp-on flow measuring device or a measuring device which can be placed within the containment.

14. The flow measuring device as claimed in claim 12, wherein:
said at least one component of high power uptake is one of: an amplifier, an analog/digital converter, a microprocessor or a logic chip.

15. The flow measuring device as claimed in claim 12, further comprising:
at least one component having a switching function, said at least one component having the switching function activates, or deactivates, said at least one component of high power uptake.

16. The flow measuring device as claimed in claim 14, wherein:
a mechanism for decreasing current consumption is integrated into said at least one component of high power uptake.

17. The flow measuring device as claimed in claim 15, wherein:
said at least one component having a switching function comprises a semiconductor switch.

Claims 18 - 21 (Cancelled).

22. The flow measuring device as claimed in claim 12, further comprising:
an energy storage element associated with said control/evaluation unit, which is sized such that it can at least store the energy required in the measuring phase.

23. A flow measuring device for determining and/or monitoring the volume, and/or mass, flow rate of a medium flowing through a containment in a streaming direction, comprising:

at least one ultrasonic transducer, which emits and/or receives ultrasonic measuring signals; and

a control/evaluation unit, which determines the volume, and/or mass, flow rate of the medium in the containment on the basis of the ultrasonic measuring signals according to the travel-time-difference principle or according to the Doppler principle, wherein:

associated with said control/evaluation unit is at least one component of high power uptake;

said control/evaluation unit is embodied such that said at least one component of high power uptake is operated intermittently in a measuring phase and in an idle phase, wherein said at least one component is activated in the measuring phase, while said at least one component has a reduced power uptake, or is turned off, in the idle phase, and

the time span between two successive measuring, or idle, phases of said at least one component of high power uptake and/or the duration of a measuring phase (t_2) and/or the duration of an idle phase (t_1) of said at least one component of high power uptake is/are predetermined.

24. A flow measuring device for determining and/or monitoring the volume, and/or mass, flow rate of a medium flowing through a containment in a streaming direction, comprising:

at least one ultrasonic transducer, which emits and/or receives ultrasonic measuring signals; and

a control/evaluation unit, which determines the volume, and/or mass, flow rate of the medium in the containment on the basis of the ultrasonic measuring signals according to the travel-time-difference principle or according to the Doppler principle; and

an input unit, via which the time span between two successive measuring, or idle, phases of said at least one component of high power takeup and/or the duration of a measuring phase (t_2) and/or the duration of an idle phase (t_1) of said at least one component of high power takeup is predeterminable, wherein:

associated with said control/evaluation unit is at least one component of high power uptake; and

said control/evaluation unit is embodied such that said at least one component of high power uptake is operated intermittently in a measuring phase and in an idle phase, wherein said at least one component is activated in the measuring phase, while said at least one component has a reduced power uptake, or is turned off, in the idle phase.

25. A flow measuring device for determining and/or monitoring the volume, and/or mass, flow rate of a medium flowing through a containment in a streaming direction, comprising:

at least one ultrasonic transducer, which emits and/or receives ultrasonic measuring signals; and

a control/evaluation unit, which determines the volume, and/or mass, flow rate

of the medium in the containment on the basis of the ultrasonic measuring signals according to the travel-time-difference principle or according to the Doppler principle, wherein:

associated with said control/evaluation unit is at least one component of high power uptake;

said control/evaluation unit is embodied such that said at least one component of high power uptake is operated intermittently in a measuring phase and in an idle phase, wherein said at least one component is activated in the measuring phase, while said at least one component has a reduced power uptake, or is turned off, in the idle phase; and

said control/evaluation unit determines the travel time of the measuring signals on the basis of predetermined system and/or process variables and specifies the time span between two successive measuring, or idle, phases of said at least one component of high power take up and/or the duration of a measuring phase (t_2) and/or the duration of an idle phase (t_1) of said at least one component of high power take up, as a function of the determined travel time.

26. A flow measuring device for determining and/or monitoring the volume, and/or mass, flow rate of a medium flowing through a containment in a streaming direction, comprising:

at least one ultrasonic transducer, which emits and/or receives ultrasonic measuring signals; and

a control/evaluation unit, which determines the volume, and/or mass, flow rate of the medium in the containment on the basis of the ultrasonic measuring signals

according to the travel-time-difference principle or according to the Doppler principle, wherein:

associated with said control/evaluation unit is at least one component of high power uptake;

said control/evaluation unit is embodied such that said at least one component of high power uptake is operated intermittently in a measuring phase and in an idle phase, wherein said at least one component is activated in the measuring phase, while said at least one component has a reduced power uptake, or is turned off, in the idle phase; and

said control/evaluation unit determines the travel time of the measuring signals on the basis of predetermined system and/or process variables, and said control/evaluation unit predetermines the time span between two successive measuring, or idle, phases of said at least one component of high power take up and/or the duration of a measuring phase (t_2) and/or the duration of an idle phase (t_1) of said at least one component of high power take up, as a function of the determined travel time and as a function of the energy which is available.

EVIDENCE APPENDIX

There is no evidence being relied upon which was submitted pursuant to 37 CFR 1.130, 1.131 or 1.132.

RELATED PROCEEDINGS APPENDIX

There is no related proceeding being relied upon.

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